

Data Analysis

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**OVERVIEW**

Different methods for the process of gathering data, transforming data, and representing it in a way that is meaningful to others.

**GOALS**

1. Extract data from different sources like text files, APIs, and databases.
2. Data cleaning techniques
3. Data processing techniques
4. Data loading techniques
5. Data visualization techniques like plots (line plot, scatter plot, etc), charts (bar charts, pie chart, donut charts, etc) , histograms, Box and Whisker Plot, Maps, Word Clouds, and Network diagrams.

**SPECIFICATIONS**

 Extract data from different sources like text files, APIs, and databases.

1. Data cleaning techniques
   * Remove Repeated Row
   * Missing value treatment
   * Removal of Irrelevant Data
   * Manual error while typing
   * Renaming Columns
2. Data visualization
   * Use of Pandas ,Seaborn ,Matplotlib for plotting different charts which include
     1. Bar Graph
     2. Histogram
     3. Line
     4. Pie Chart
     5. Pair Plot
     6. Rel Plot
     7. Count Plot
     8. Heat Map …etc



1. Web Scrapping

Extracting Data from Popular Sites like amazon and flipkart and converting it into csv and predicting Prices of different cell phone models

1. Regular Expressions

Use of **re** package to validate password, extracting details from file searching for specific word etc.

1. Folium and Geopy

Use of **Folium and Geopy** package plot different locations on map calculate distance between 2 locations.

1. Tableu

Use of Tablue for data analytics.

**Summary**

On completion of the project the I learnt to:

1. Perform data extraction.

2. Understand and apply different data transformation and loading techniques.

3. Identify and apply appropriate data visualization technique(s).

4. Web Scrapping

5. Regular Expressions